Data Ingest and Archive Confidence Test - SDP1

Test Objectives:

This test deals with the data ingest and archive functions of the ECS. The objectives of this test are:

- to verify that L0 data, both EDS and PDS can be ingested from EDOS
- to verify that TRMM, NOAA, and ADC data sets can be ingested,
- to verify that ancillary data can be ingested from the SDPF, TSDIS, and the FDF,
- to verify the delivery of ingested data per standing orders,
- to verify fault detection, as it relates to data ingest and archive,
- to verify administration activities associated with the ingest and archive functionality, and
- to test the throughput of the ingest and archive processes.

Test Configuration:

Hardware and software configurations at each ECS site are managed and tracked by the M&O organization at that site. The most current configuration status report will be obtained prior to the start of testing and be referenced in the test report. The following exhibit depicts the basic flow of information for this test.

Participants and Support Requirements:

Participants:

M&O Support at the DAACs
TSDIS User to supply data for ingest
SDPF User to supply data for ingest
FDF Operator to supply data for ingest
NOAA Operator to supply data for ingest
EDOS Operator

ETS Operator (when EDOS is unavailable)

Communications:

Voice - Telephone
Data - Ebnet
IP addresses: TBS

Equipment and Software :

Hardware: INS (Ingest Subsystem) to include the working storage, archive robotics, client hosts and networked ingest functions; Gateway router Hub; LAN.
Software: TBS

Test Tools:

ETS (to simulate the ingest of EDS and PDS from EDOS whenever EDOS is unavailable.)

Test Data:

A subset of the following data is necessary to complete this test. All data types will be utilized during the interface tests. This test uses as many data types as are available within the time period that the test is scheduled.

Description / Characteristics	Source	File/script name & Location
NOAA Snow/Ice Cover	NOAA ADC	
NOAA Aerosol Weekly	NOAA ADC	
NOAA Vegetation Index Data	NOAA ADC	
NOAA Total Ozone Data	NOAA ADC	
NOAA Ozone Profile	NOAA ADC	
Final Analysis and Forecast System, Global Analysis (FNL), NMC Final Forecast	NOAA/NMC	
Medium Range Forecast System, Forecast 00Z (MRF), NMC Medium	NOAA/NMC	

Description / Characteristics	Source	File/script name & Location
Range Forecast		
ETS Analysis and Forecast System, Forecast 00Z (ETA)	NOAA/NMC	
Expedited Data Sets (EDS)	EDOS / ETS	
Production Data Sets (PDS)	EDOS / ETS	
VIRS data products - standard, combined, associated meta data, browse products, archived, algorithm and documentation	TSDIS	
PR data products - standard, combined, associated meta data, browse products, archived, algorithm and documentation	TSDIS	
TMI data products - standard, combined, associated meta data, browse products, archived, algorithm and documentation	TSDIS	
GV data products - standard, combined, associated meta data, browse products, archived.	TSDIS	
Directory and Guide information	Various	
Updated Meta-data sets	Various	

Test Case Descriptions:

SDP1.1 Level 0 Data Ingest

This test verifies that both EDS and PDS can be ingested from EDOS and staged for production. The method for ingesting PDS and EDS from EDOS is to coordinate the transfer via phone or mail message and then, using ftp, to actually transfer the data. No data acquisition data availability messages are included in this test. The data transfer is transferred and stored on the ECS archive media.

Requirements to be Verified:

DADS0130 EOSD1502 ESN-0070 ESN-1140
ESN-1170 ESN-1340 ESN-1350 SDPS0020

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	DAAC	Login as a DAAC operator and open a UNIX-script file to maintain test history.	Login allowed, script file initiated.		
1.002	DAAC and EDOS	Validate IP address and password information.	Both systems ascertain valid information.		
1.003	DAAC and EDOS	Verify connection between the two systems.	Each system is able to 'ping' the other system.		
1.004	DAAC	Log onto the resource planner and verify that resources are configured to ingest data from EDOS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from EDOS.		
2.001	EDOS	Send a message to the DAAC Ingest/Distribution technician indicating that Level 0 PDS is available for ingest and specify the location of intended delivery.	The DAAC receives the message and ensures that the specified directory has adequate space for receiving the data set. If a problem exists, then notify the EDOS operator of the problem and wait to transfer the data until further notice.		ESN-1170#A, ESN-1340#A,
2.002	DAAC	Monitor the data transfer.	At the Ingest/Distributio n technician's terminal observe		ESN-0070#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
			the file being transferred.		
2.003	EDOS	Start the data transfer.	The DAAC should observe that the transfer has started and also when the transfer has completed.		ESN-0280#A, ESN-1140#A, ESN-1170#A, ESN-1350#A,
2.004		Send an ingest complete message to the DAAC.	The message is received by the DAAC indicating that the PDS was transferred successfully.		EOSD1502#A, ESN-1170#A, SDPS0020#A,
2.005	DAAC	Verify that a storage status notice has been sent to EDOS.	EDOS receives the message stating that the data has been ingested and contains the temporary storage information for the PDS.		DADS0487#A, ESN-1170#A,
2.006	EDOS	Send a message to the DAAC Ingest/Distribution technician indicating that Level 0 EDS is available for ingest and specify the location of intended delivery.	The DAAC receives the message and ensures that the specified directory has adequate space for receiving the data set. If a problem exists, then notify the EDOS operator of the problem and wait to transfer the data until further notice.		ESN-1170#A, ESN-1340#A,
2.007	DAAC	Monitor the data	At the		ESN-0070#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		transfer.	Ingest/Distributio n technician's terminal observe the file being transferred.		
2.008	EDOS	Start the data transfer.	The DAAC should observe that the transfer has started and also when the transfer has completed.		ESN-0280#A, ESN-1140#A, ESN-1170#A, ESN-1350#A,
2.009	EDOS	Send an ingest complete message to the DAAC.	The message is received by the DAAC indicating that the EDS was transferred successfully.		EOSD0020#A, EOSD1502#A, EOSD1605#A, ESN-1170#A, SDPS0020#A,
2.010	DAAC	Verify that a storage status notice has been sent to EDOS.	EDOS receives the message stating that the data has been ingested and contains the temporary storage information for the EDS.		DADS0487#A, ESN-1170#A,
3.001	DAAC	Review the ingest history log to verify that both a PDS and EDS have been ingested and stored on the system.	Verify that the EDOS Level) data (both PDS and EDS) has been ingested and is now logged into the ECS.		
3.002	IV&V Analyst	Compare the ingested data files with the original data files to ensure no corruption took place during transfer.	The files are identical.		
3.003	DAAC	Record the data file	Files names are		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		names of the data ingested in this test. The data is used in other tests.	recorded.		

SDP1.2 Data Set Ingest

This test verifies that TRMM, NOAA, and ADC data sets can be ingested and that the metadata is updated. The method for ingesting these data sets is ftp and the control of the ingest is coordinated by mail messages. The data is transferred and stored on the ECS archive media, and the metadata updated to reflect where the data is stored.

Requirements to be Verified:

EOSD0020 EOSD1607 ESN-0070 ESN-1140
ESN-1170 ESN-1340 ESN-1350 SDPS0020
SDPS0021

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	DAAC	Login as a DAAC operator and open a UNIX script file to maintain test history.	Login allowed, script file initiated.		
1.002	DAAC and Data Source	Validate IP address and password information.	Both systems ascertain valid information.		
1.003	DAAC and Data Source	Verify connection between the two systems.	Both systems are able to 'ping' the other system.		
1.004	IV&V Analyst	Schedule in advance the particular data sets to be ingested from a particular external interface and make plans for the day of testing.	The resources are scheduled for the day of testing and the data sets are available.		
2.001	DAAC	Using the resource planning tool, verify that the resources are scheduled for data ingest.	All resources are scheduled and available.		ESN-1140#A,
2.002	DAAC	Notify the	The		ESN-1170#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		ingest/distribution technician that the resources are available and that the system is ready to ingest data.	ingest/distribution technician receives the message.		
2.003	DAAC	Ingest/distribution technician selects the monitor option.	The ingest status monitor tool displays ingest status.		
2.004	Data Source	Initiate the ingest sequence.	The system writes the data and the delivery record to the specified location within the DAAC.		ESN-1340#A, ESN-1350#A,
2.005	DAAC	Ingest/distribution technician monitors the transfer.	The monitor shows data being transferred and detects the delivery record.		EOSD1607#A, ESN-0070#A,
2.006	DAAC	The system now verifies the data with the delivery record.	The information is verified.		SDPS0020#A,
2.007	DAAC	Metadata is verified and data is reformatted into HDF-EOS format.	The data and metadata are archived into the appropriate data server.		SDPS0021#A,
2.008	DAAC	Send notification to data provider of successful data ingest.	Message received by data source.		EOSD0020#A,
3.001	DAAC	Record the data file names of the data ingested in this test. The data is used in other tests.	Data file names are recorded.		
3.002	DAAC	Print out the history log to verify test activities.	All activities recorded in the history log.		

SDP1.3 Ancillary Data Ingest from SDPF.

This test verifies that ancillary data can be ingested from SDPF to the LaRC DAAC. This test verifies the appropriate message passing associated with data ingest from the SDPF to include: data availability notices, data delivery acknowledgment, as wells as ingest status messages. The entire process is monitored.

Requirements to be Verified:

DADS0130 DADS2040 ESN-0070 ESN-1140
ESN-1170 ESN-1340 ESN-1350 SDPS0020

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	LaRC DAAC	Login as a DAAC operator and open a UNIX script file to maintain test history.	Login allowed, script file initiated.		
1.002	LaRC DAAC and SDPF	Validate IP address and password information.	Both systems ascertain valid information.		
1.003	LaRC DAAC and SDPF	Verify connection between the DDF and the LaRC DAAC.	Both systems are able to 'ping' the other system.		
1.004	LaRC DAAC	Resource Planner verifies that resources have been allocated for the ingest of ancillary data from the SDPF.	Resources are allocated. If not, configuration changes are made to the system to ingest data from SDPF.		
1.005	LaRC DAAC	Once resources are allocated, the resource planner notifies the Ingest/Distribution Technician that the system is ready to ingest data from SDPF.	Message is received and the test begins.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
2.001	SDPF	Send a data availability schedule to the LaRC DAAC.	The LaRC DAAC receives the message.		ESN-1170#A,
2.002	SDPF	Send an Authentication Request to the LaRC DAAC.	LaRC DAAC confirms receipt of authentication request and verify authentication response message is sent to the SDPF.		
2.003	SDPF	Verify receipt of authentication response from the LaRC DAAC.	Socket connection between the SDPF and the LaRC DAAC established.		
2.004	SDPF	Send a data availability notice to the LaRC DAAC.	The LaRC DAAC receives the DAN and all fields are checked for valid syntax and other limit checks. A message or log file indicates transfer of DAN. The data files are then placed in the ingest queue and a DAA is transferred to the SDPF.		
2.005	SDPF	Verify successful receipt of the DAA.	A message or log file entry indicates the successful receipt of the DAA.		
2.006	LaRC DAAC	Monitor the ingest process.	Note the extraction and verification of metadata, conversion of data into HDF-EOS format, and insertion of data		ESN-0070#A, ESN-1140#A, ESN-1340#A, ESN-1350#A, SDPS0020#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
			into the data server. Verify that the appropriate files are ingested and archived into the ECS.		
2.007	LaRC DAAC	Send a valid DDN to the SDPF (via electronic mail message).	The SDPF receives the ingest status message. SDPF display shows delivery of data files completed successfully.		
2.008	SDPF	Verify successful receipt of the DDN and send a data delivery acknowledgment (DDA) to the LaRC DAAC.	The LaRC DAAC receives the message and deletes the completed ingest request.		
2.009	LaRC DAAC	Request the data to be archived.	Request is placed in a queue.		
2.010	LaRC DAAC	Monitor the archive process.	The data is successfully archived.		
3.001	LaRC DAAC	Generate the Ingest History Log and print the UNIX script file for the test.	Verify that the data was ingested and archived.		ESN-0280#A,
3.002	SDPF	Generate the event log for the test.	Verify that the data was transferred and all message passing successful.		
3.003	LaRC DAAC and SDPF	Verify the connection between the two systems has been terminated.	No connection should exist between the two systems.		
3.004	LaRC DAAC	Compare the ingested data with the original data to verify no data corruption during transfer.	Data is identical.		
3.005	LaRC DAAC	Record the data file names of the data	Data file names are recorded.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		ingested in this test. The data is used in other tests.			
3.006	SDPF	Return the SDPF to the operation mode it was in prior to the test.			
3.007	LaRC DAAC	Return the LaRC DAAC to the state it was in prior to the test.			

SDP1.4 Ancillary Data Ingest from TSDIS.

This test verifies that ancillary data can be ingested from TSDIS to the GSFC DAAC. This test verifies the appropriate message passing associated with data ingest from the TSDIS to include: data availability notices, data delivery acknowledgment, as wells as ingest status messages. The entire process is monitored.

Requirements to be Verified:

ESN-0070 ESN-1140 ESN-1170 ESN-1340
ESN-1350 SDPS0020

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	GSFC DAAC	Login as a DAAC operator and open a UNIX script file to maintain test history.	Login allowed and script file initiated.		
1.002	GSFC DAAC and TSDIS	Validate IP address and password information.	Both systems ascertain valid information.		
1.003	GSFC DAAC and TSDIS	Verify connection between the two systems.	Both systems are able to 'ping' the other system.		
1.004	GSFC DAAC	Resource Planner verifies that resources have been allocated for the ingest of ancillary data from TSDIS.	Resources are allocated. If not, configuration changes are made to the system to ingest data from TSDIS.		
1.005	GSFC	Once resources are	Message is received		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
	DAAC	allocated, the resource planner notifies the Ingest/Distribution Technician that the system is ready to ingest data from TSDIS.	and the test begins.		
2.001	TSDIS	Send a data availability schedule to the GSFC DAAC.	The DAAC receives the message.		ESN-1170#A,
2.002	TSDIS	Send an Authentication Request to the GSFC DAAC.	The GSFC DAAC confirms receipt of authentication request and verify authentication response messages is sent to the TSDIS.		
2.003	TSDIS	Verify receipt of authentication response from the GSFC DAAC.	Socket connection between the TSDIS and the GSFC DAAC is established.		
2.004	TSDIS	Send a data availability notice to the GSFC DAAC.	The GSFC DAAC receives the DAN and all fields are checked for valid syntax and other limit checks. A message or log file indicates transfer of DAN. The data files are then placed in the ingest queue and a DAA is transferred to the TSDIS.		
2.005	TSDIS	Verify successful receipt of the DAA.	A message or log file entry indicates the successful receipt of the DAA.		
2.006	GSFC DAAC	Monitor the ingest process.	Note the extraction and verification of metadata, conversion of data into HDF-EOS format, and insertion of data into the data		ESN-0070#A, ESN-1140#A, ESN-1340#A, ESN-1350#A, SDPS0020#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
			server. Verify that the appropriate files are ingested and archived in the ECS.		
2.007	GSFC DAAC	Send a valid DDN to the TSDIS.	The TSDIS receives the ingest status message. TSDIS display shows delivery of data files completed successfully.		
2.008	TSDIS	Verify successful receipt of the DDN and send a data delivery acknowledgment (DDA) to the GSFC DAAC.	The GSFC DAAC receives the message and deletes the completed ingest request.		
2.009	GSFC DAAC	Request the data to be archived.	Request is placed in a queue.		
2.010	GSFC DAAC	Monitor the archive process.	The data is successfully archived.		
3.001	GSFC DAAC	Generate the Ingest History Log.	Verify that the data was ingested and archived..		
3.002	TSDIS	Generate the event log for the test.	Verify that the data was ingested and archived.		
3.003	TSDIS and GSFC DAAC	Verify the connection between the two systems has been terminated.	No connection should exist between the two systems.		
3.004	GSFC DAAC	Compare the ingested data with the original data to verify no data corruption during transfer.	Data is identical.		
3.005	GSFC DAAC	Record the data file names of the data ingested in this test. The data is used in other tests.	Data file names recorded..		
3.006	TSDIS	Return the TSDIS to the operation mode it			

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		was in prior to the test.			
3.007	GSFC DAAC	Return the GSFC DAAC to the state it was in prior to the test.			

SDP1.5 Ancillary Data Ingest from FDF.

This test verifies that ancillary data can be ingested from FDF. This method of ingest is to coordinate the transfer via phone or mail message and then, using ftp, to actually transfer the data. No data acquisition data availability messages are included in this test. The data is transferred and stored on the ECS archive media.

Requirements to be Verified:

ESN-0070 ESN-1140 ESN-1170 ESN-1340 ESN-1350

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	DAAC	Login as a DAAC operator and open a UNIX script file to maintain test history.	Login allowed, script file initiated.		
1.002	DAAC and FDF	Validate IP address and password information.	Both systems ascertain valid information.		
1.003	DAAC and FDF	Verify connection between the two systems.	Both systems are able to 'ping' the other system.		
1.004	DAAC	Resource Planner verifies that resources have been allocated for the ingest of instrument data from FDF.	Resources are allocated. If not, configuration changes are made to the system to ingest data from FDF.		
1.005	DAAC	Once resources are allocated, the resource planner notifies the Ingest/Distribution Technician that the	Message is received and the test begins.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		system is ready to ingest data from FDF.			
2.001	FDF	Notify the DAAC of the availability of instrument data from FDF specifying the location where the data is to be delivered.	The DAAC receives the message.		ESN-1170#A,
2.002	DAAC	Ingest/Distribution Technician monitors the ingest process on the Ingest Tool GUI screen.	The screen shows the system ready to ingest data from FDF and updates throughout the ingest process.		ESN-0070#A, ESN-1340#A, ESN-1350#A,
2.003	FDF	Begin transferring data.	The DAAC monitor shows the data is being transferred.		
2.004	FDF	Send message stating data transferred complete.	The DAAC receives the message. Monitor indicates transfer successful.		ESN-1140#A, ESN-1170#A,
2.005	DAAC	Send a storage status notice to the FDF indicating that the data has been ingested and stored.	The FDF receives the message and verifies the storage location.		ESN-1170#A,
3.001	DAAC	Generate the Ingest History Log.	Verify that the data was ingested and stored.		
3.002	DAAC	Compare the ingested data with the original data to verify no data corruption during transfer.	Data is identical.		
3.003	DAAC	Record the data file names of the data ingested in this test. The data is used in other tests.	Data names recorded.		

SDP1.6 Standing Orders

This test verifies that users can enter standing orders into the system and have data delivered to them upon ingest of that data. Standing orders are entered by the SCF users and accepted by the system for data which is to be ingested. After the data is ingested, the user is notified that the requested data has arrived and is available in a specified pull area.

Requirements to be Verified:

ESN-0290 ESN-0300 ESN-0450

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	DAAC	Login as a DAAC operator and open a UNIX script file to maintain test history.	Login allowed, script file initiated.		
1.002	SCF	Login to the ECS.	Login allowed.		
2.001	SCF	Start the subscription driver and submit a standing order subscription for the data types to be ingested (allow enough time in the order to accomplish the ingest).	The standing order subscriptions are accepted and displayed as expected.		ESN-0300#A,
2.002	SCF	Enter a subscription for a standing order which will expire in 5 minutes, and 30 minutes.	The standing orders are accepted and displayed as expected.		ESN-0290#A,
2.003	Data Provider	Send a data availability schedule to the data provider.	The data provider receives the message.		
2.004	Data Provider	Send an Authentication Request to the DAAC.	The DAAC confirms receipt of the authentication request and verify authentication response message is sent to the data provider.		
2.005	Data Provider	Verify receipt of the authentication response	Socket connection between the		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		for the DAAC.	DAAC and the data provider established.		
2.006	Data Provider	Send a data availability notice to the DAAC.	The DAAC receives the DAN and a DAA is transferred to the DAAC.		
2.007	Data Provider	Verify successful receipt of the DAA.	A message or log file entry indicates the successful receipt of the DAA. The ingest of the data begins.		
2.008	DAAC	Send a valid DDN to the data provider.	The data provider receives the ingest status message.		
2.009	Data Provider	Verify successful receipt of the DDN and send a data delivery acknowledgment (DDA) to the DAAC.	The DAAC receives the message.		
2.010	DAAC	Request the data to be archived.	The archive request is placed in the archive queue.		
2.011	DAAC	The data ingest and archive is completed.	The user submitting the standing order is notified that the data is in the pull area.		ESN-0450#A,
2.012	SCF	Verify that the message is received and that the data is actual in the ftp pull directory as specified.	Data is in the proper directory. Data is available to be ftp'd.		
2.013	SCF	Pull the data to the SCF and verify contents.	Data pulled to the SCF is identical to data stored in the archive.		
2.014	DAAC	Verify that the standing order is still displayed	Standing order is still listed on the		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		on the subscription screen.	display.		
2.015	SCF	As the time limit (5 minutes and 30 minutes) expire, the SCF user receives notification that the entered expiration time has been achieved and the plan is being removed.	The standing orders are updated as the time expires.		
2.016	DAAC	Ingest more data which corresponds to the one remaining standing order subscription to ensure the message is sent to the SCF once the data is ingested and archived.	The message is sent to the SCF.		
2.017	SCF	Verify that the data contents and location match the message received from the DAAC.	Message is received and data content is verified.		
3.001	DAAC	Print off the history log.	History log contains all major steps of execution.		
3.002	DAAC	Record the file names of the data that was archived for this test so that they can be removed at a later time.	Data names recorded..		
3.003	DAAC	Log off system.	Test completed.		

SDP1.7 Ingest Fault Detection

This test verifies that hardware and software errors occurring during ingest are detected and resolved. Ingest hardware is taken off-line and the system must detect the hardware

failure. Also, ingest software processes are halted to ensure that the system detects that these processes are no longer available. The system must identify the errors and give recommendations on how to solve the problem. The operator will then follow the suggestion and fix the problem.

Requirements to be Verified:

EOSD3910	ESN-0620	ESN-0640	ESN-0830
ESN-0840	ESN-0900	ESN-0920	SMC-0340
SMC-3390	SMC-3395	SMC-4315	SMC-4335

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	GSFC or LaRC DAAC	Login as a DAAC operator and open an UNIX script to maintain test history.	Login allowed and script file initiated.		
1.002	TSDIS or SDPF	Validate IP address and password information.	Both systems ascertain valid information.		
1.003	TSDIS or SDPF	Verify connection between the two systems.	Should be able to 'ping' the DAAC.		
1.004	GSFC or LaRC DAAC	Verify connection between the two systems.	Should be able to 'ping' the data provider.		
1.005	GSFC or LaRC DAAC	Resource Planner verifies that resources have been allocated for the ingest of ancillary data from TSDIS/SDPF.	Resources are allocated. If not, configuration changes are made to the system to ingest data from TSDIS/SDPF.		
1.006	GSFC or LaRC DAAC	Once resources are allocated, the resource planner notifies the Ingest/Distribution Technician that the system is read to ingest data from	Message is received and the test begins.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		TSDIS/SDPF.			
2.001	TSDIS or SDPF	Send a data availability schedule to the DAAC.	The DAAC receives the message.		
2.002	TSDIS or SDPF	Send an authentication request to the DAAC.	The DAAC confirms receipt of authentication request and verify authentication response message is sent to the TSDIS/SDPF.		
2.003	TSDIS or SDPF	Verify receipt of authentication response from the DAAC.	Socket connection between the data provider and the DAAC is established.		
2.004	TSDIS or SDPF	Send a data availability notice to the DAAC.	The DAAC receives the DAN. The data files are then placed in the ingest queue and a DAA is transferred to the TSDIS/SDPF.		
2.005	TSDIS or SDPF	Verify successful receipt of the DAA.	A message or log file entry indicates the successful receipt of the DAA.		
2.006	GSFC or LaRC DAAC	Monitor the ingest process.	Monitor shows ingest in progress.		
2.007	GSFC or LaRC DAAC	Once the ingest is in progress, disconnect the ingest server from the system. Record TOD:_____	An alarm is generated stating that the ingest server is down and the ingest in progress is terminated. The alarm should also recommend procedures for fixing the problem. Record		ESN-0620#A, ESN-0640#A, ESN-0830#A, ESN-0840#A, ESN-0900#A, ESN-0920#A, SMC-3390#A, SMC-3395#A, SMC-4315#A, SMC-4335#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
			TOD of the alarm _____		
2.008	GSFC or LaRC DAAC	Perform the steps recommended and get the hardware back on line.	The ingest server now shows active and the ingest is restarted.		EOSD3910#A, SMC-0340#A,
2.009	GSFC or LaRC DAAC	Once the ingest is in progress, halt the ingest software process. Record TOD _____	An alarm is generated stating that the ingest process is down and the ingest in progress is terminated. The alarm should also give recommended steps to correct the problem. Record TOD _____		EOSD3910#A, ESN-0620#A, ESN-0640#A, ESN-0830#A, ESN-0840#A, ESN-0840#A, ESN-0900#A, ESN-0920#A, SMC-3390#A, SMC-3395#A, SMC-4315#A, SMC-4335#A,
2.010	GSFC or LaRC DAAC	Perform the steps recommended and get the software process restarted.	The ingest process is now active and the ingest is restarted.		SMC-0340#A,
2.011	GSFC or LaRC DAAC	Once the ingest is completed, send a valid DDN to the TSDIS or SDPF.	The TSDIS/SDPF receives the ingest status message. TSDIS/SDPF display shows delivery of data files completed successfully.		
2.012	TSDIS or SDPF	Verify successful receipt of the DDN and send a data delivery acknowledgment (DDA) to the DAAC.	The DAAC receives the message and deletes the completed ingest request.		
2.013	GSFC or LaRC DAAC	Request the ingested data to be archived.	The request is placed in the archive queue.		
3.001	GSFC or LaRC DAAC	Generate the Ingest History Log.	Verify that the data was ingested and archived. Verify that		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
			the times in the file correspond to the TODs recorded during the test.		
3.002	TSDIS or SDPF	Generate the event log for the test.	Verify that the data was ingested.		
3.003	TSDIS or SDPF	Verify the connection between the two systems has been terminated.	No connections should exist between the two systems. Investigate the two connections that were broken to ensure they are no longer on the system.		

SDP1.8 Archive Fault Detection

This test verifies that when software and hardware errors occur with archive resources, that data can be obtained from backup resources and be made available. Archive hardware is taken off-line and the system must detect the hardware failure. Also, archive software processes are halted to ensure that the system detects that these processes are no longer available. The system must identify the errors and give recommendations on how to solve the problem. The operator will then follow the suggestion and fix the problem.

Requirements to be Verified:

DADS2950 ESN-0920 SMC-3390 SMC-3395
SMC-4315 SMC-4335

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	DAAC	Login as a DAAC operator and open a UNIX script file to maintain test history.	Login allowed and script file initiated.		
1.002	DAAC	Verify that the archive queue has data item waiting to be archived.	The display should detect at least two data items ready to be archived.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
2.001	DAAC	Once the archive is in progress, disconnect the storage media from the system. Record TOD _____	An alarm is generated to notify the operator that the storage media is off-line and the archive is placed back in the queue. Recommendations to correct the problem is given in the alarm. Record TOD _____		ESN-0920#A, SMC-3390#A, SMC-3395#A, SMC-4315#A, SMC-4335#A,
2.002	DAAC	Manually select the archive to go to the backup archive resource.	The archive restarts with the archive going to the backup archive media.		DADS2950#A,
2.003	DAAC	Once the archive is complete on the secondary media, correct the problem following the procedures.	The display shows that the archive media is back on line.		
2.004	DAAC	Start the archive of another data item. Once the archive is in progress, kill the archive software task. Record TOD _____	An alarm is generated to notify the operator that the archive process has died and the archive is placed back in the queue. Recommendations to correct the problem is given in the alarm. Record TOD _____		ESN-0920#A, SMC-3390#A, SMC-3395#A, SMC-4315#A, SMC-4335#A,
2.005	DAAC	Restart the archive software task.	The display shows that the archive task is now active.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
2.006	DAAC	Restart the archive process and allow the data to be archived.	Data is successfully archived.		
2.007	DAAC	Verify that the data now appears in the archive and is accessible.	Data appears in the archive list.		
3.001	DAAC	Generate the History Log.	Verify that both errors appear in the log and that the successful archive is registered as well.		
3.002	IV&V analyst	Compare the archived data with the original data to ensure no corruption took place during the error processing.	Archived data is identical to original data.		

SDP1.9 Administration

This test analyzes and verifies various attributes of the ingest and archive functionality. The media storage procedures are examined and verified. Storage allocation is computed and analyzed. Off-site backup media is inspected. Performance criteria is analyzed for data collection, product generation, and data delivery.

Requirements to be Verified:

DADS2270 DADS2276 DADS2300 EOSD3220
IMS-0240 SMC-3350

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
1.001	DAAC	Log onto the system.	The operator is logged on.		
2.001	DAAC	Generate a report containing all archives currently in the system.	Report generated.		

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
2.002	DAAC	Perform a system backup.	Backup performed.		
2.003	DAAC	Ingest and archive additional data.	Data is ingested and archived.		
2.004	DAAC	Generate a report containing all archives currently in the system.	The data archived in step 2.003 now appear on the report.		
2.005	DAAC	Perform an archive restore from the backup tape generated in step 2.002.	The restore is completed.		
2.006	DAAC	Generate a report containing all archives currently in the system.	The files archived in step 2.003 no longer appear on the archive report.		DADS2300#A, DADS2276#A,
2.007	Database Administrator	Log onto the data base administration tool.	The tool is active.		
2.008	Database Administrator	Verify that the administrator can modify the data base schema.	The tool exists and the administrator successfully changes the data base schema.		IMS-0240#A,
2.009	Database Administrator	Verify that the administrator can monitor the performance of the data base.	Either a display or a report is generated showing data base performance.		IMS-0240#A,
2.010	Database Administrator	Verify that the administrator can tune the systems performance.	A tool is displayed which allows the administrator to modify the performance of the data base.		IMS-0240#A,
2.011	Database Administrator	Verify that the administrator has control of user access to the data base.	A tool is displayed allowing the administrator to create new users and modify user		IMS-0240#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
			access to the data base.		
2.012	Database Administrator	Verify that the administrator can perform an on-line incremental backup of the data base.	The administrator generates a data base back up.		IMS-0240#A,
2.013	Database Administrator	Verify that the administrator can perform an on-line recovery of the data base.	The administrator performs a data base restore.		IMS-0240#A,
2.014	Database Administrator	Verify that the administrator can export/import data to and from the data base.	The administrator performs an export and an import of data.		IMS-0240#A,
2.015	DAAC	Generate performance reports.	The reports are generated.		
3.001	IV&V Analyst	Inspect and verify that an off-site backup copy of all EOS data which will be difficult or impossible to recover is being kept.	The analyst verifies the existence of the backup.		DADS2270#A,
3.002	IV&V Analyst	Verify that all media is stored in protected areas with environmental and accounting procedures applied.	Media storage is verified.		EOSD3220#A,
3.003	IV&V Analyst	Examine the performance reports for the following information: Data Collection , product generation, QA and validation, reprocessing, data delivery to DAACs and to users, response to user requests, response to TOOs,	All the information is contained in the report.		SMC-3350#A,

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		response to field experiments, response to emergency situations.			

SDP1.10 Ingest/Archive Throughput

The objective of this test is to determine the throughput of the ingest and archive processes. Large files (maximum size TBD) are ingested and archived. The process is repeated so that many large files are being ingested and archived as quickly as possible. Throughput to the RAID devices is also determined. Performance is compared to hardware specifications to ensure that the devices are performing within the manufacture's limits.

Requirements to be Verified:

There are no mission critical requirements associated with this test. The test is to verify processing limitation in an operational environment.

STEP	TEST STATION	OPERATOR ACTION	EXPECTED RESULT	COMMENTS	ALLOCATED REQMNTS
		The procedures for this test are still being generated.			